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REMARKS

Reconsideration of the present application is respectfully requested.

Submitted concurrently with this Response is a Supplemental Information Disclosure Statement. In response to the statement of paragraph 1 of the Detailed Action, Applicants are submitting a copy of the referenced Final Report in accordance with 37 C.F.R. §1.98.

Applicant has cancelled claims 34-37, and provided new claims 64-69. Claim 44 has been amended to improve the clarity of the preamble.

Drawings

In paragraph 2 of the Detailed Action, the drawings are objected to under 37 C.F.R. §1.83(a). The detailed Action notes that all the elements of the claimed methods must be shown in the drawings.

With regards to claims 34-37, Applicants have cancelled these claims. With regards to claims 44-47, these claim elements are fully supported by FIG.2.

Applicants have provided new claims 64-69. Support for these claims is indicated later in this Response.

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Specification

In paragraph 3 of the Detailed Action, the disclosure is objected to because of an informality. Applicants have revised the priority statement in compliance with paragraph 3. Removal of this objection is requested.

Claim Rejections – 35 USC §112

In paragraph 5 of the Detailed Action, claims 34-37 and 44-47 were rejected under 35 USC §112, first paragraph, as containing subject matter which was not described in the Specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. The detailed action states that the recitations of the claimed method steps have not been clearly described.

Applicants respectfully disagree with these rejections. With regards to claims 34-37, these claims have been cancelled without prejudice to their consideration in a continuing application.

Applicants have provided new claims 64-69. Support for these claims is indicated later in this Response.

With regards to claims 44-47, Applicants cite the following as examples of specification support for these claims:

A method for heat treating a spring, comprising:

Page 28, the first full paragraph beginning at line 8, and the second full paragraph beginning at line 13.

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providing a coil spring with a first outer diameter and a first length fabricated from a shape memory material;

Page 12, the second full paragraph beginning at line 19;

Page 15, the first full paragraph beginning at line 5;

Page 15, the second fully paragraph beginning at line 23;

providing a member defining a chamber with an inner diameter and a length, the chamber length being greater than the length of the spring and the chamber inner diameter being greater than the outer diameter of the spring;

Beginning on page 28 with the second full paragraph beginning on line 13 and extending through to page 29, to the end of the second full paragraph, which ends at line 21;

placing the spring in the chamber;

Page 29, the third full paragraph beginning at line 22.

heating the chamber and spring to more than about 400 degrees C. and less than about 600 degrees C. for a period of more than about two minutes; and

Page 29, the third full paragraph beginning at line 22.

permitting the spring outer diameter to grow to the inner diameter of the chamber, and permitting the spring length to grow to the length of the chamber.

Page 30, the first full paragraph beginning at line 16.

claim 45

Page 32, the first full paragraph.

claim 46

Page 32, the second full paragraph beginning at line 14.

claim 47

Page 32, the second full paragraph beginning at line 14.

In paragraph 7 of the Detailed Action, claims 34-37 and 44-47 were rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. With regards to

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claims 34-37, these claims have been cancelled without prejudice to their consideration in a continuing application.

With regards to claims 44-47, Applicants respectfully disagree with these rejections. In paragraph 7, the Detailed Action states that "It is also not understood as to how to remove the spring from the chamber after permitting the spring outer diameter to grow to the inner diameter of the chamber and the spring length to grow to the length of the chamber (as per claim 46)."

Also in paragraph 7, it is stated that, "...it is further not understood as how the haptic display can holding the temperature for heating the chamber and spring to more than 400°C for more than 2 minutes (as per claim 44) or more than 90°C for less than 10 seconds (as per claim 45) and not hurt the user."

Applicants have amended the preamble of claim 44 to refer to heat treating of a spring. Claim 44 did not and does not pertain to a haptic display.

Claim Rejections – 35 USC §103

In paragraph 10 of the Detailed Action, claims 34-37 and 44-47 were rejected under 35 USC §103 as being unpatentable over U.S. Patent No. 5,449,292 to Tani et al. in view of U.S. Patent No. 5,107,235 to Torres-Isea.

With regards to claims 34-37, these claims have been cancelled without prejudice to their consideration in a continuing application.

With regards to claims 44-47, paragraph 10 of the Detailed Action states that the teachings of Tani et al. and Torres-Isea do not explicitly disclose the limitations of these claims.

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Applicants agree with this statement. However, paragraph 10 also states that such limitations "are old and well known" and are "an arbitrary obvious design choice.", without stating the source of this knowledge. Applicants respectfully disagree with this statement.

Applicants are unable to adequately respond to this rejection because the detailed action does not cite any documents. This rejection is not sustainable as a matter of law, as stated in the recent case In re Thrift, 63 USPQ 2d 2002 (CAFC 2002). In Thrift, the CAFC overturned obviousness rejections made by the Examiner and supported by the Board of Appeals and Interferences. The CAFC found error in these actions because the Examiner's "very general and broad conclusion of obviousness . . . fail [ed] to address the . . . the limitations of [the] claim". Thrift @ page 13 . The Examiner's statement only generally addressed the claim, and did not discuss unique limitations of the claim. Thrift @ page 13 of 16. It appears that the obviousness rejections were so flawed, that during the appeal to the CAFC, the PTO did not even defend the Board's rejection of the claim. Id.

In applying the law of Thrift to the present case, there are numerous other claims in which the cited references do not include all limitations of the claims. In both Thrift and Lee, the CAFC noted that the PTO has an "obligation to cite references to support its conclusions." Lee @ 1434. Thrift @ page 11. The CAFC states that the PTO "must document its reasoning on the record to allow accountability." Lee @ 1435. Thrift @ 11.

Applicants respectfully request removal of the rejection of claims 44-47, or in the alternative that there be specific rejections so that a response can be properly prepared.

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New Claims

Applicants have added new claims 64-69. Claim 64 is a new independent claim, and claims 65-69 are dependent on claim 64.

Claim 64 includes a combination of features not found in any of the cited references, nor combinations of any of the cited references. As one example, claim 64 includes heating of a shape memory spring; urging of a pin by the heated spring in a first direction; sliding a first feature of the pin past a second feature of a second member during said urging; withdrawing the pin in a second direction opposite of the first direction; and limiting the withdrawing by coacting of the first feature and the second feature.

Applicants believe that a fair reading of the Tani et al. and Torres-Isea references do not disclose all of these features. For example, the Tani et al. reference (which the Detailed Action relies upon for everything except the shape-memory spring) does not disclose a pin having a first feature and a second member having a second feature, such that the first feature slides past the second feature during urging of the pin in a first direction, but coacting together to limit withdrawing of the pin in a second direction opposite of the first direction. Instead, Tani et al. utilizes a push-up cam 5 to raise the position of a rod 3, and also to permit withdrawal of rod 3. Applicants are unaware of any structure in Tani et al. or Torres-Isea or any other reference which permits sliding of one feature past another feature in one direction, but limits movement of the pin in an opposite direction, along with other limitations of claim 64.

New claims 64-69 are supported throughout the specification. With regards to new independent claim 64, the following is a recitation of text within the originally filed specification

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that fully supports the particular claim limitation within the standards of 35 USC §112. This listing of citations is not exclusive, but only by way of example.

A method for displaying haptic information, comprising:

Page 1:

providing a shape-memory spring, a pin positionable at a plurality of positions and having a first feature, a first member defining a hole, the pin being guided within the hole, and a second member having a second feature;

Page 10, the first full paragraph beginning at line 7;
Page 12, the second full paragraph beginning at line 19;
Page 15, the first full paragraph beginning at line 5;
Page 15, the second fully paragraph beginning at line 23;
Page 33, the first full paragraph beginning at line 4 through the end of the second full paragraph on page 34, which ends at line 22;
Page 35, the second full paragraph beginning at line 18;
Page 37, the second full paragraph beginning at line 11;
Page 38, the first full paragraph beginning at line 7;
Page 40, the second full paragraph beginning at line 7 to the end of the first incomplete paragraph of page 42, ending at line 12;
Page 49, the first full paragraph beginning on line 5;

heating the spring;

Page 19, the second full paragraph beginning at line 21;
Page 22, the first full paragraph beginning at line 5;
Page 36, the first full paragraph beginning on line 21;
Page 37, the second full paragraph beginning at line 11;
Page 39, the first full paragraph beginning on line 17;
Page 43, the first full paragraph beginning at line 4;
Page 44, from the first full paragraph beginning at line 4 through the end of the second full paragraph ending at line 19;

urging of the pin by the heated spring in a first direction from a first position toward a second position;

Page 10, the second fully paragraph beginning at line 18;
Page 36, the first full paragraph beginning on line 21;
Page 37, the second full paragraph beginning at line 11;
Page 39, the first full paragraph beginning on line 17;
Page 43, the first full paragraph beginning at line 4;
Page 44, from the first full paragraph beginning at line 4 through the end of the second full paragraph ending at line 19;

sliding the first feature of the pin past the second feature of the second member during said urging;

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Page 35, the first full paragraph beginning at line 9;
Page 36, the first full paragraph beginning on line 21;
Page 39, the first full paragraph beginning on line 17;
Page 43, the first full paragraph beginning at line 4;
Page 44, from the first full paragraph beginning at line 4 through the end of the second full paragraph ending at line 19;

cooling of the spring after said urging;

Page 16, the second full paragraph beginning at line 21;
Page 35, the second full paragraph beginning on line 18;
Page 38, the first full paragraph beginning at line 7;
Page 38, the second full paragraph beginning with line 23;
Page 43, the first full paragraph beginning at line 4;
Page 44, from the first full paragraph beginning at line 4 through the end of the second full paragraph ending at line 19;

withdrawing the pin in a second direction opposite of the first direction by said cooling; and

Page 38, the second full paragraph beginning with line 23;
Page 43, the first full paragraph beginning at line 4;
Page 44, from the first full paragraph beginning at line 4 through the end of the second full paragraph ending at line 19;

limiting said withdrawing by coacting of the first feature and the second feature.

Page 32, the third full paragraph beginning at line 22;
Page 34, the third full paragraph beginning at line 23;
Page 35, the second full paragraph beginning at line 18;
Page 38, the second full paragraph beginning with line 23;
Page 43, the first full paragraph beginning at line 4;
Page 44, from the first full paragraph beginning at line 4 through the end of the second full paragraph ending at line 19;
Page 49, the first full paragraph beginning on line 5;

claim 65

Page 10, from the first full paragraph beginning at line 7 through the end of the first full paragraph on page 11, ending at line 17.

claim 66

Page 38, the second full paragraph beginning at line 18 through the end of that paragraph on page 36 at line 20.
Page 38, the second paragraph beginning at line 23 through the end of that paragraph on page 39 at line 16.

claim 67

Page 35, the second full paragraph beginning at line 18 through the end of the paragraph on page 36 at line 20.

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Page 37, the second full paragraph beginning at line 11 extending through the end of the first full paragraph of page 38 ending at line 22.

Page 40, the second full paragraph beginning at line 7 extending through to the end of the paragraph on page 42 at line 12.

claim 68

Page 37, from the second full paragraph beginning at line 11 through the end of the first full paragraph on page 40 ending at line 6.

Page 43, the first full paragraph beginning at line 4 through the end of the second full paragraph on page 44 ending at line 20.

claim 69

Page 35, the first full paragraph beginning at line 9.

Page 35, the second full paragraph beginning at line 18 through the end of that paragraph on page 36 at line 20.

Page 38, the second paragraph beginning at line 23 and extending through page 40, line 1.

Page 43, the first full paragraph beginning at line 4 extending through the paragraph on page 44 ending at line 19.

With regards to support for claims 64-69 by the drawings, support for all of these claims can be found in the following figures:

A method for displaying haptic information, comprising:

FIGS. 1, 5, 6, 7A, 7B

providing a shape-memory spring, a pin positionable at a plurality of positions and having a first feature, a first member defining a hole, the pin being guided within the hole, and a second member having a second feature;

FIGS. 4A, 4B, 4C, 4D, 4E, 5, 6, 7A, 7B

heating the spring;

FIGS. 5, 6, 7A, 7B

urging of the pin by the heated spring in a first direction from a first position toward a second position;

FIGS. 5, 6, 7A, 7B

sliding the first feature of the pin past the second feature of the second member during said urging;

FIGS. 5, 6, 7A, 7B

cooling of the spring after said urging;

FIGS. 5, 6, 7A, 7B

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withdrawing the pin in a second direction opposite of the first direction by said cooling; and
FIGS. 5, 6, 7A, 7B

limiting said withdrawing by coacting of the first feature and the second feature.
FIGS. 5, 6, 7A, 7B

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CLOSING

Applicants have cancelled claims 34-37 and added new claims 64-69. Applicants respectfully request examination of pending claims 44-47 and 64-69.

It should be understood that the above remarks are not intended to provide an exhaustive basis for patentability or concede any basis for rejections or objections in the Office Action. Further, with regards to the various statements made in the Office Action concerning any prior art, the teachings of any prior art are to be interpreted under the law. Applicants make no admissions as to any prior art. The remarks herein are provided simply to overcome the rejections and objections made in the Office Action in an expedient fashion.

The undersigned welcomes a telephonic interview with the Examiner if the Examiner believes that such an interview would facilitate resolution of any outstanding issues.

Respectfully submitted

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The identified information, taken alone or in combination with other art, provides information relating to the subject matter of the invention, but fails to teach, disclose or suggest the present invention. The filing of this Information Disclosure Statement shall not be construed as an admission that the information cited is, or is considered to be, material to patentability as defined in § 1.56(b).

This Statement is being submitted under 37 C.F.R. §1.97(c)(2) more than three months after the filing date of the application and after the mailing of the first Office Action on the merits. The Commissioner is authorized to charge the fee of \$180 to the credit card as listed on the enclosed Credit Card Payment Form. No other fees are believed to be due; however, if any other fees are deemed to be required, please charge such fees to Deposit Account No. 23-3030, but not to include any payment of issue fees.

Respectfully Submitted,

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